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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER LURKENS

Appeal 2008-2743
Application 10/500,507
Technology Center 2100

Decided:¹ February 12, 2009

Before LEE E. BARRETT, JEAN R. HOMERE,
and ST. JOHN COURTENAY III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Data (electronic delivery).

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-4 and 8-14.² We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

² The Examiner withdrew the rejections of claims 5-7 under 35 U.S.C. § 103(a), in the Examiner's Answer. Claims 5-7 are now objected to as being dependent from a rejected base claim. The Examiner has indicated that these claims would be allowable if rewritten in independent form including the base claim and any intervening claims (Ans. 6).

THE INVENTION

The disclosed invention relates to an electronic circuit and to a method of operating a high pressure lamp in an ignition mode and in a normal operational mode. (Spec. 1, ll. 1-2).

Independent claim 12 is illustrative:

12. In electronic circuit for operating a high-pressure lamp in at least two modes, a first half bridge and a second half bridge connected in parallel between an operating potential and a reference potential, a filter coupled to the output of the first half bridge circuit, a resonant circuit coupled to the output of the second half bridge circuit, wherein the lamp can be coupled between the filter and the resonant circuit, and a first means for operating the second half bridge, the improvement comprising:

second means for operating the first half bridge, whereby the first half bridge and the second half bridge operate independently of each other.

THE REFERENCES

The Examiner relies upon the following references as evidence in support of the obviousness rejections:

Jungreis	US 6,535,403 B1	Mar. 18, 2003 (filed Aug. 17, 2001)
Haas	US 5,712,536	Jan. 27, 1998 (filed Jul. 31, 1995)
Nilssen	US 4,949,015	Aug. 14, 1990 (filed May 30, 1986)

THE REJECTIONS

1. The Examiner rejected claims 1 and 8-14 under 35 U.S.C.

§ 103(a), as being unpatentable over Nilssen in view of Jungreis.

2. The Examiner rejected claims 2-4 under 35 U.S.C. § 103(a) as being unpatentable over Nilssen, in view of Jungreis and Haas.

“[T]he examiner bears the initial burden on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Therefore, we look to Appellant's Briefs to show error in the proffered *prima facie* case.

Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Obviousness under 35 U.S.C. § 103

PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, “[w]hat matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions.” *Id.* at 1740.

Claims 1 and 8-14

We consider the Examiner's rejection of claims 1 and 8-14 under 35 U.S.C. § 103(a) as being unpatentable over Nilssen in view of Jungreis. Since Appellant's arguments have treated these claims as a single group which stand or fall together, we select independent claim 12 as the representative claim for this group. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Appellant's Contentions

1. Appellant contends that Nilssen fails to teach that the first half bridge and second half bridge operate independently of each other. (App. Br. 4 and Reply Br. 3-4).
2. Appellant contends that Nilssen requires that operation of one of the bridges requires that the second bridge be maintained in a non-operative state. Therefore, the bridges do not operate independently. (*Id.*).
3. Appellant contends that the meaning of the term "independently" as used in Nilssen is unclear. (App. Br. 5).
4. Appellant contends that there is no basis for combining Nilssen (fluorescent lamp) with Jungreis (HID lamp). (*Id.*).
5. Appellant contends that Jungreis teaches away from a resonant circuit. (App. Br. 7).

ISSUES

1. Has Appellant shown the Examiner erred in determining that the cited references teach that the first half bridge and second half bridge operate independently of each other?

2. Has Appellant shown the Examiner erred in combining Nilssen and Jungreis?

3. Has Appellant shown the Examiner erred in determining that Jungreis teaches a filter coupled to the output of the first half-bridge circuit and a resonant circuit coupled to the output of a second half bridge circuit?

FINDINGS OF FACT

In our analysis *infra*, we rely on the following findings of fact (FF) that are supported by a preponderance of the evidence:

Nilssen

1. Nilssen teaches a full-bridge inverter that is capable of operation in two modes: a first mode wherein one of the two pairs of switching transistors self-oscillates, and a second mode wherein both pairs of transistors self-oscillate. (*See Abst.*, ll. 1-10).

2. Nilssen teaches a full-bridge inverter which consists of two half-bridge inverters either of which can be made to operate independently of the other as long as the other is maintained in a non-operative state. (Col. 4 ll. 61-64).

Jungreis

3. Jungreis teaches two half bridges that include LC circuits coupled to their respective outputs (L_1 C_1 and L_2 C_2 respectively). (*See Fig. 1 and col. 2, ll. 54-63*)

ANALYSIS

As noted above, Appellant contends that Nilssen fails to teach that the first half bridge and second half bridge operate independently of each other. We disagree for the reasons discussed *infra*.

Claim Construction

“[T]he PTO gives claims their ‘broadest reasonable interpretation.’”
In re Bigio, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)).

Claim 12 recites “whereby the first half bridge and second half bridge operate independently of each other.” (emphasis added). We note that the recited claim language does not require simultaneous operation of both half bridges. The claim language only requires that both the first and second half bridge operate (i.e., perform their respective functions) independently.

According to the Specification, “independent operation” of the two resonant circuits is based in the decoupled nature of the two half bridges. For instance, the Specification teaches that “the two half bridges are operated in a decoupled manner in principle, i.e., as least as long as the high-pressure lamp is not ignited. (See Spec. 2, ll. 30-32 and p. 6 ll. 10-15). Thus, it is our view that according to the Specification, “independent” operation of the two half bridges is conditioned upon the high-pressure lamp remaining unlit.

Based on the above claim construction, we find that Nilssen teaches two half-bridge inverters either of which can be made to operate

independently of the other as long as the other is maintained in a non-operative state. (FF 1-2). We do not agree with Appellant's contention that the condition (as long as the other is maintained in a non-operative state) undermines the independent operation of the two half bridge inverters taught in Nilssen. It is our view that in light of the teachings of the Specification, the operation of the half bridge inverters taught in Nilssen are no less independent than embodiments described in Appellant's Specification. Thus, we find that the cited references teach that the first half bridge and second half bridge operate independently of each other.

As noted above, Appellant contends that one skilled in the art would not have been motivated to combine the teachings of Nilssen with Jungreis. (See App. Br. 6, § 13-14).

After considering the evidence before us, it is our view that Appellant's arguments do not take into account what the collective teachings of the prior art would have suggested to one of ordinary skill in the art and are therefore ineffective to rebut the Examiner's prima facie case of obviousness. See *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“*The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.*”) (citations omitted, emphasis added). This reasoning is applicable in the present case.

Appellant argues that Jungreis teaches that the bridges are operated 180° out of phase, which is not independent operation. Again, Appellant's

arguments do not take into account the collective teachings of the prior art, most notably Nilssen. As discussed above, the Examiner relied on Nilssen for the teaching of independent operation. The Examiner's rejection is based on the *combination* of Nilssen and Jungreis.³ Thus, Appellant's contentions which focus on the deficiencies of Jungreis are not found to be persuasive.

Appellant contends that Jungreis fails to teach a filter coupled to the output of the first half-bridge circuit and a resonant circuit coupled to the output of a second half bridge circuit.

We agree with the Examiner's determination that Jungreis discloses an LC circuit coupled to the output of the second half bridge (FF 3). This LC circuit has a resonant frequency (Ans. 13). We further note that the Examiner's determination regarding the LC circuit of Jungreis has not been rebutted by Appellant. Thus, based on the record before us, we find Appellant has not shown error in the Examiner's *prima facie* case.

In addition, we note that claim 12 is a Jepson claim. As such the preamble is an implied admission that the subject matter recited in the preamble is prior art and will not be given patentable weight. *In re Fout*, 675 F.2d 297, 301 (CCPA 1982). Accordingly, we affirm the Examiner's rejection of claim 12, and claims 1 and 8-14 which fall therewith, under 35 U.S.C. § 103(a) as being unpatentable over Nilssen and Jungreis.

³ One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Claims 2-4

We next consider the Examiner's rejection of claims 2-4 as being unpatentable over Nilssen in view of Jungreis and Haas.

We note that Appellant's arguments do not assert that the cited references fail to teach the limitations recited in claims 2-4. Instead Appellant's arguments address limitations/features that are not recited in claims 2-4. (*See* App. Br. 7-8) For example, Appellant argues that the "third capacitor recited in claim 2 relates to timing." We note that claim 2 only recites how the third and fourth capacitors are coupled to the circuit recited in claim 12. Appellant similarly presents arguments regarding claims 3 and 4. We decline to read these features into claims 2-4.

Because Appellant has not shown the Examiner erred in rejecting claims 2-4, we affirm the Examiner's rejection of claims 2-4 under 35 U.S.C. § 103(a) as being unpatentable over Nilssen in view of Jungreis and Haas.

CONCLUSIONS

Based on the findings of facts and analysis above, we conclude the following:

Appellant has not shown the Examiner erred in determining that the cited references teach that the first half bridge and second half bridge operate independently of each other.

Appellant has not shown the Examiner erred in combining Nilssen and Jungreis.

Appellant has not shown the Examiner erred in determining that Jungreis teaches a filter coupled to the output of the first half-bridge circuit and a resonant circuit coupled to the output of a second half bridge circuit.

Therefore, claims 1-4 and 8-14 are not patentable over the prior art of record.

DECISION

The decision of the Examiner rejecting claims 1-4 and 8-14 under 35 U.S.C. § 103(a) is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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